For our project, we created a picture puzzle application using Python. The idea was to turn images into interactive sliding puzzles that the user can solve. We used several nature photos, such as an elephant in the forest and a mountain landscape, to make the puzzle visually interesting.

Our program is organized into different files. The **app.py** file runs the main application and manages how the user interacts with the puzzle. The **image_utils.py** file prepares the images by cropping and resizing them so they can be divided into equal parts. The **puzzle.py** file handles the logic of the game, including how the tiles are represented, how they move, and how the program detects when the puzzle is complete. The **README.md** file explains how to set up and run the project.

The algorithm we used works by splitting an image into a grid of smaller pieces. These pieces are then shuffled randomly to create the starting state of the puzzle. The empty space in the grid allows tiles to slide around, and the user can move tiles one by one to try to restore the original picture. The program continuously checks the arrangement of the tiles against the solved state, and once all the pieces are in the correct order, the puzzle is completed.

By combining image processing with puzzle logic, we built a working application that demonstrates both programming structure and the use of algorithms to create an interactive game.